

PHYSICAL EXERCISES
FOR
VALIDS AND CONVALESCENTS
—
OCHSNER

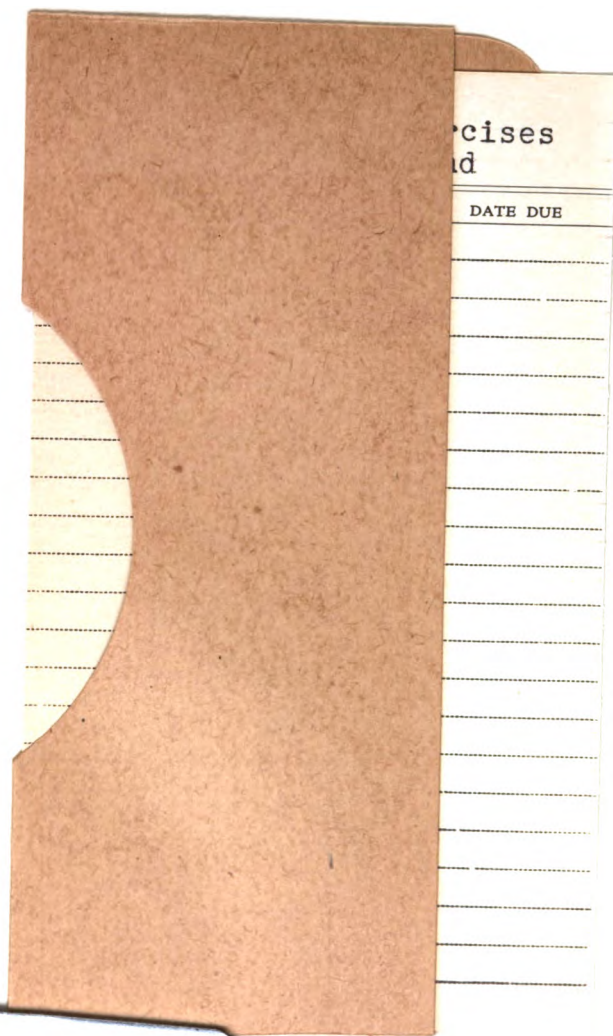
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PHYSICAL EXERCISES FOR INVALIDS AND CONVALESCENTS

BY

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“Love labor; for if thou dost not want it for thy Food, thou mayest for Physick. It is wholesome for the body, and good for the mind. It prevents the fruits of idleness, which many times comes from nothing to do, and leads too many to do what is worse than nothing.

WILLIAM PENN.

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PREFACE

For a number of years I have felt the need in my practice of some convenient, compact manual of physical exercises for patients who are convalescing from surgical operations or from some severe illness and also for persons who are engaged in sedentary work and who, because of lack of proper physical exercise, are below par. The need has been particularly urgent in orthopedic work, in the after-treatment for the correction of deformities following infantile paralysis and similar affections. At first I met the difficulty by giving the patients typewritten slips of exercises and later made use of a number of books. The typewritten slips proved rather inconvenient and cumbersome and not entirely satisfactory because these lists contained no illustrations. The books available were also unsatisfactory because no book that I could find fully answered my needs. I have consequently decided to publish a very short, compact, easily comprehended, convenient and inexpensive manual describing concisely but clearly forty exercises which can be executed, without apparatus in the patient's own room, at any time convenient to the patient. These exercises are especially designed for the use of convalescents, in-

valids and persons engaged in sedentary occupations. While it is primarily compiled to fill my own personal needs in the after-treatment of surgical, particularly orthopedic cases, I hope other surgeons as well as internists and general practitioners will find this little volume of value.

THE AUTHOR.

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PHYSICAL EXERCISES

GENERAL CONSIDERATIONS

Physical exercise can be secured in three ways: first, by indulging in purposeful productive exercise, commonly called physical work; second, sports, and third, gymnastics. Each of these three forms of exercise has its advantages and its disadvantages. Physical work, if the kind suited to the individual in question can be secured, is unquestionably more satisfactory mentally, because the production with one's own hands of something valuable and useful is one of the great joys of living, and, as Penn says, "If thou dost not want it for thy Food, thou mayest for Physick." Purposeful exercise has the great advantage also of being less self-conscious and self-consciousness in exercise is always to be avoided as much as possible. One of the objections to work as a physical exercise in our large cities and in our modern highly specialized industrial life is that the average physical trade is apt to exercise only a small portion of the muscular system of the body. Thus, a man working a modern machine all day may exercise only a very small percent of the several hun-

dred muscles of the body. Another objection is that, particularly in our large cities, the man with sedentary occupation finds it very difficult to secure suitable physical exercise with any degree of regularity. As a result a considerable percent of the people living in our cities do not get enough exercise to maintain themselves in perfect health and consequently must make other provisions for exercise. Some of these resort to sports. Sports, such as horseback riding, rowing, tennis, golf, baseball, hunting, fishing and many others are all to be recommended and encouraged because they not only furnish us with much needed exercise but they provide us with the still more needed diversion, rest and healthful recreation. However, these too can only rarely be depended upon exclusively, for, as a rule, we are unable to indulge in these daily and, in order to keep in perfect health, we need a certain minimum of physical exercise every day, below which we cannot go without some impairment of our physical health. Such sports as can be indulged in only once a week may do more harm than good because they may overstrain an enfeebled body one day a week and provide no exercise the other six days.

Life is activity. Fullness of life is full activity of all our being, physical, intellectual and spiritual. Intellectual and spiritual welfare of the in-

dividual are dependent to a large degree upon the physical health of the body.

Since purposeful exercise and sports are not available to all of us,—in fact, are not always available to many of us,—and rarely available to many of us, it becomes necessary to have a satisfactory substitute to fall back upon when necessary. To fill this gap many systems of calisthenics and physical exercise have been devised,—most of them with good points. Some of them splendid for certain purposes but none of them so far as I know entirely satisfactory for invalids and convalescents. For these I have selected the following from a very large number.

These exercises thus arranged have a number of important advantages. They can be performed without apparatus of any kind. If taken daily they will help to keep the body in good health, or after any illness they will help to restore normal conditions. They are easily learned, require little time for their performance and are adapted to old and young, strong and weak alike.

Proper oxygenation of the blood is of the greatest importance in securing the highest degree of vitality, hence it becomes necessary to consider first of all the exercise of breathing. During moderate exercises or the ordinary processes of life, only a small portion of the lung tissue is called

into active use and unless one exerts himself vigorously for at least five or ten minutes daily, it is necessary to give some thought to the question of breathing in order that all of the lung tissue may be called into active use and the lungs completely expanded at least several times a day, for there is probably nothing which weakens, deteriorates and subjects the lungs to the dangers of disease more than the lack of use. Many persons have never learned to breathe properly. This is true especially of those persons who have never engaged in strenuous physical labor. Such persons are very likely to use only the upper portion of their lungs in breathing—the type known as “Chest breathing.” These persons rarely use their diaphragms and abdominal muscles in breathing at all and for that reason do not properly fill the lower portion of their lungs with any degree of regularity. In order to breathe properly, the lower portion of the lungs should be first filled with air. If one has accustomed himself to faulty breathing, it is sometimes rather difficult to learn the right method. One of the easiest ways of learning this correctly is to stand bare-chested before a large mirror, then by bringing the abdominal muscles outward (as illustrated in Fig. 1a) and later the chest above (as illustrated in Fig. 1b) one will be able to fill the lungs completely. This exercise should be done several times a day in front of a

mirror until the right method has been correctly learned and established as a habit. In doing this one should stand erect and draw the air in through his nose with the mouth closed. If the nose is obstructed, it is necessary to have it first looked after by a competent physician and have all obstruction to breathing removed. While doing the exercises given below it is very important that one learns to breathe free and easy through the nose during the whole process of each exercise. At the end of each exercise, I would advise taking a deep breath as just described and illustrated in Fig. 1. The exercises should all be taken in a well ventilated room with the clothes fairly loose and comfortable. No apparatus of any kind is needed. The exercises can be taken any time of day; not later than the evening meal, however, and preferably in the morning on arising. The first one alone should be taken the first day. It should be thoroughly learned so that in a few days it will become perfectly automatic and easy. After the first day one new one should be added, learning it thoroughly until as many have been added as is considered desirable and advisable for the individual to take. For the maintenance of ordinary health the average individual can take all of the exercises, once daily. A person in less vigorous health should not take as many. In fact, the guide should be "Avoidance of excessive fatigue." A delicate

individual may find it advisable not to take more than ten or a dozen at first, then to add new ones more slowly, say one new one every three or four days. Some little individual judgment must be used by each person. Vigorous persons or persons in training may take two or three times the number indicated in the book. Each exercise should be done vigorously, with the muscles firm, well under control, with perfectly smooth motions, not having the slightest jerky character. As most of these motions consist of stretching and bending of the joints, it is desirable that as much energy be used in the one process as in the other.

Students, professional men, investigators, and, in fact, all persons who are compelled to do intellectual work or monotonous physical work for several consecutive hours daily will find it to their advantage to throw off their coats, open the windows and go through a dozen of these exercises several times a day. If they will do this when they begin to feel fagged, tired, listless, sleepy or dull they will soon find the quality of their work improved and the quantity increased, and this with less wear and tear on their nervous systems.

These exercises have been so arranged that different portions of the body will be exercised alternately and, if all of the exercises are taken daily, practically every voluntary muscle in the body will

receive sufficient exercise to keep it supple and in reasonable health and vigor.

These exercises are not to be considered a substitute for physical work and sports, except for those who, because of physical infirmity, are unable to work or indulge in sports. For all others they are to be used to supplement work and sports when for some reason it is impossible for the individual to get sufficient exercise to maintain himself in good physical condition.

PHYSICAL EXERCISES

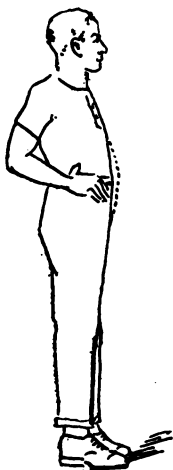


Fig. 1-A.

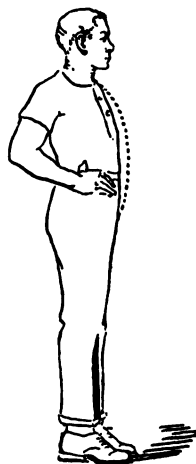


Fig. 1-B.

EXERCISE NO. 1.

Once.

Stand erect, heels together, shoulders back, hands on hips, lips closed. Draw in slowly through nose, first filling lower portion of lungs and later upper portion of lungs. Blow out slowly through mouth, holding lips so as to offer a little resistance to passage of air.

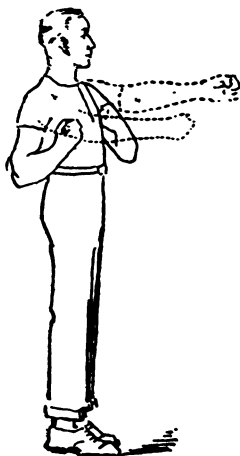


Fig. 2.

EXERCISE NO. 2.

Five Times With Each Arm.

Stand erect, heels together, breathe naturally through nose. Right hand closed on chest, push out horizontally forward steadily and vigorously as far as you can. Draw back vigorously till hand is on chest. Repeat five times and then similarly five times with left arm. Follow this with one breathing exercise as illustrated in Fig. 1.



Fig. 3.

EXERCISE NO. 3.

Five Times in Each Direction.

Stand erect, heels together, rotate the head from right to left five times. Repeat in the opposite direction five times, making as large a circle as possible. Breathing exercise No. 1, once.

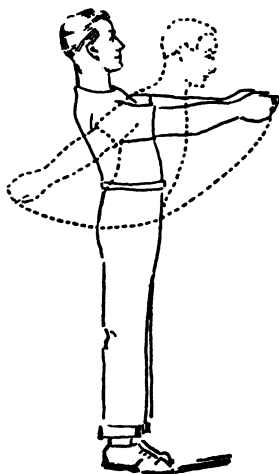


Fig. 4.

EXERCISE NO. 4.**Five Times.**

Stand erect, heels together, with hands closed, swing both arms forward vertically as far as possible, then back as far as possible. Repeat five times. Then swing the arms in opposite direction five times. Breathing exercise No. 1, once.

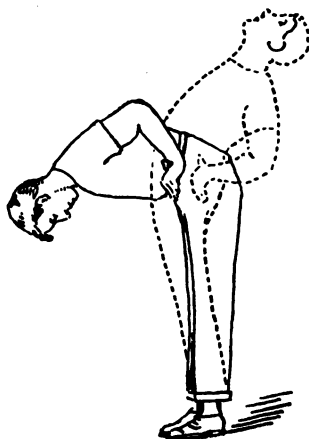


Fig. 5.

EXERCISE NO. 5.**Five Times.**

Stand erect, heels together, hands on hips. Bend forward gently, steadily and slowly as far as possible, then straighten up and bend backwards as far as possible. Repeat five times. Breathing exercise No. 1, once.

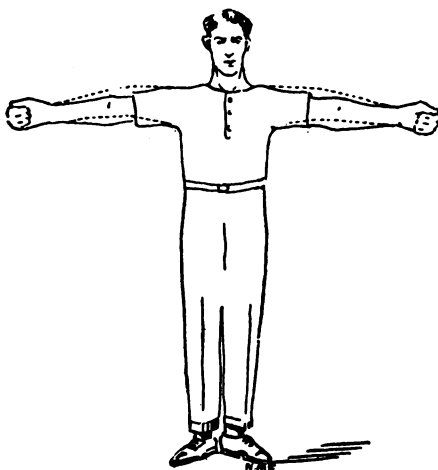


Fig. 6.

EXERCISE NO. 6.**Ten Times.**

Stand erect, heels together, hands closed. Hold both arms horizontally outward from the body and rotate arms back and forth ten times. Breathing exercise No. 1, once.



Fig. 7.

EXERCISE NO. 7.**Five Times.**

Stand erect, hands on hips. Bend right knee and thigh as much as possible, bringing knee as near body as possible. Then left limb. Repeat alternating right limb and left limb each five times. Breathing exercise No. 1, once.

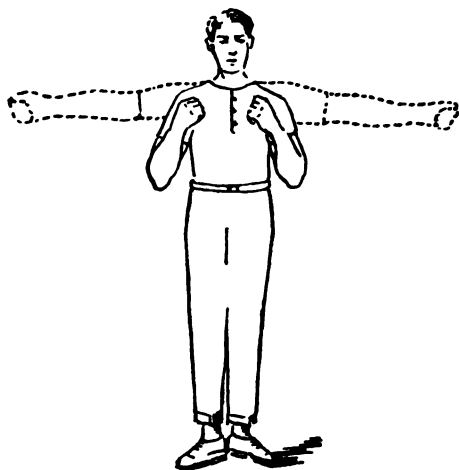


Fig. 8.

EXERCISE NO. 8.**Five Times.**

Stand erect, heels together. Close hands on chest, extend both arms horizontally outward as far as possible. Bring fists back to chest. Repeat five times. Breathing exercise No. 1, once.

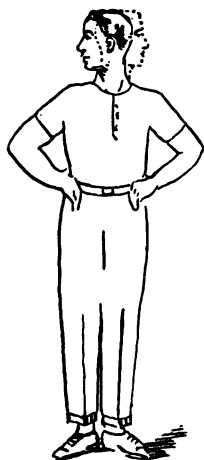


Fig. 9.

EXERCISE NO. 9.**Five Times.**

Stand erect, heels together. Turn head from right to left and left to right as far as it will go comfortably five times in each direction. Breathing exercise No. 1, once.

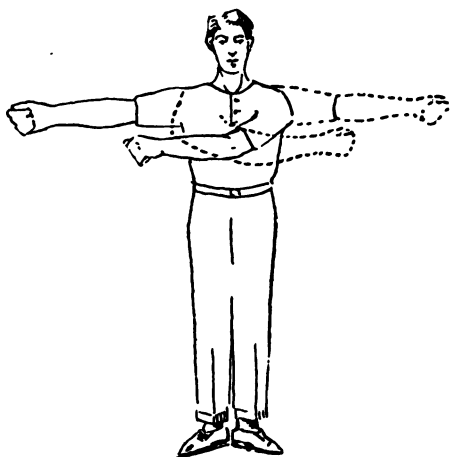


Fig. 10.

EXERCISE NO. 10.**Five Times.**

Stand erect, heels together. Swing arms horizontally back and forth as far as they will comfortably go five times in each direction. Breathing exercise No. 1, once.

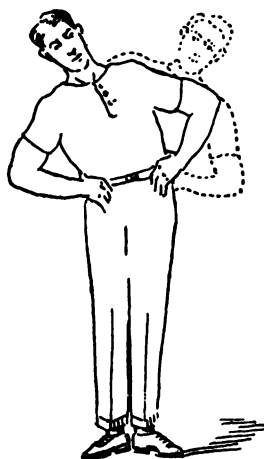


Fig. 11.

EXERCISE NO. 11.**Five Times.**

Bend slightly forward, heels together, hands on hips. Lean from side to side as far as possible five times. Breathing exercise No. 1, once.



Fig. 12.

EXERCISE NO. 12.**Five Times.**

Heels together, knees straight, body bent forward slightly. Push downward and forward with both hands, then backward and upward, like in working a buck saw, five times. Breathing exercise No. 1, once.



Fig. 13.

EXERCISE NO. 13.**Five Times.**

Stand erect, heels together, hands on hips. Raise on toes as high as possible, then keeping body straight, lower by bending at hips and knees as far as possible. Then back to first position. Repeat five times. Breathing exercise No. 1, once.



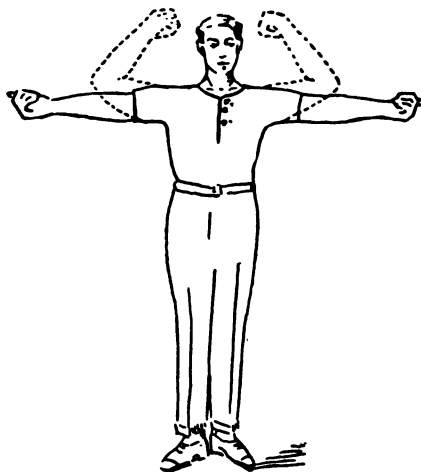


Fig. 14.

EXERCISE NO. 14.**Five Times.**

Stand erect, heels together. Close hands, raise arms to horizontal position. Alternately bend elbows and straighten them out in this position five times. Breathing exercise No. 1, once.

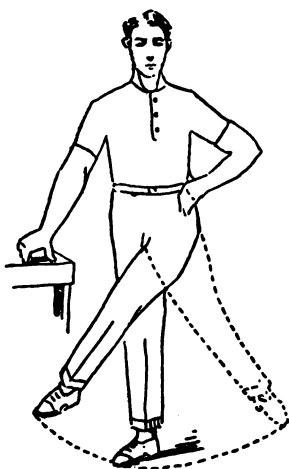


Fig. 15.

EXERCISE NO. 15.**Five Times.**

Stand erect, heels together. Swing right limb from right to left in front of left limb, five times. Repeat with left limb. At first it may be necessary to support oneself a little with one hand. Breathing exercise No. 1, once.

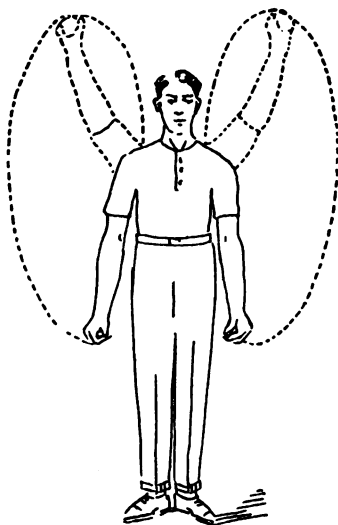


Fig. 16.

EXERCISE NO. 16.**Five Times in Each Direction.**

Stand erect, heels together, arms straight. Describe circles with each arm from before backward five times and then five times from behind forward, making the circle as large as possible and as nearly vertical and as near the body as possible. Breathing exercise No. 1, once.

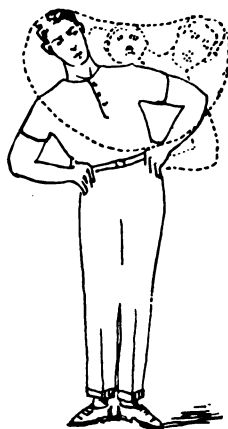


Fig. 17.

EXERCISE NO. 17.

Five Times in Each Direction.

Stand erect, heels together, hands on hips. Keeping the hips as steady and firm as possible, rotate the upper portion of the body from the hips, making as big a circle as possible. Face forward during the whole exercise. Repeat the exercise from right to left five times, then reverse and repeat it five times from left to right. Breathing exercise No. 1, once.

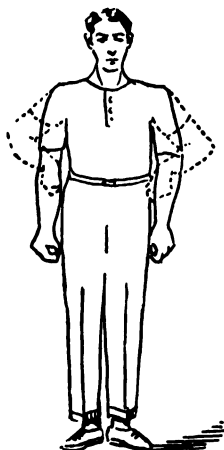


Fig. 18.

EXERCISE NO. 18.**Five Times.**

Stand erect, heels together, hands closed at side of body. Bend elbows and draw hands up vertically and then straighten out again. Breathing exercise No. 1, once.

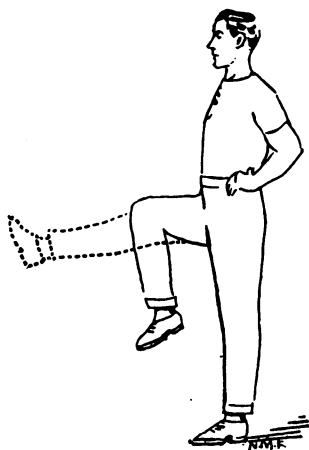


Fig. 19.

EXERCISE NO. 19.**Five Times With Each Leg.**

Stand erect, heels together, hands on hips. Raise right leg to horizontal with the knee bended at first, then straighten the knee. Repeat alternately five times with each leg. Breathing exercise No. 1, once.

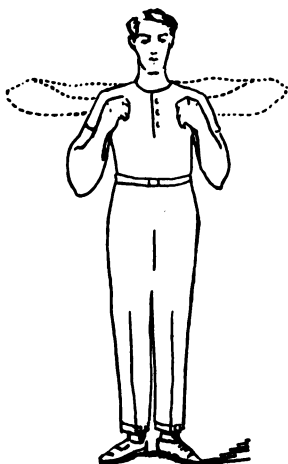


Fig. 20.

EXERCISE NO. 20.**Five Times.**

Stand erect, heels together. Place closed hands on chest and raise elbows as high as possible. Breathing exercise No. 1, once.

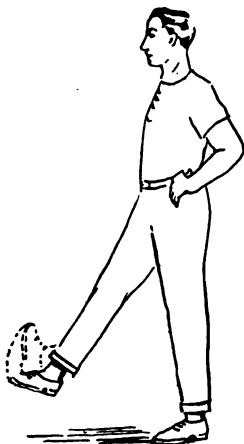


Fig. 21.

EXERCISE NO. 21.**Five Times.**

Stand erect, heels together, hands on hips. Bring right leg forward moderately so as to clear ground well, then flex and extend foot at the ankle joint. Repeat five times, then do the same exercise with the left leg. Breathing exercise No. 1, once.

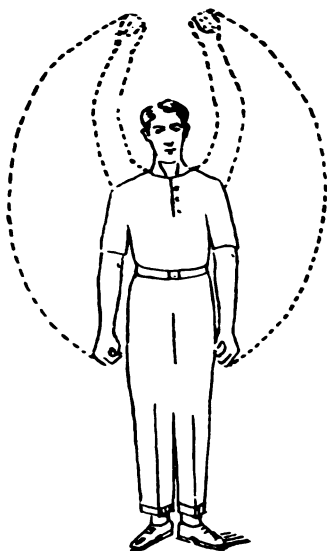


Fig. 22.

EXERCISE NO. 22.**Five Times.**

Stand erect, heels together, arms hanging at side. Without bending elbows bring arms first to horizontal and then to vertical position near the sides of the head. Then back to first position and repeat five times. Breathing exercise No. 1, once.

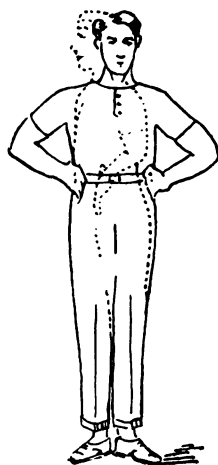


Fig. 23.

EXERCISE NO. 23.**Five Times.**

Stand erect, heels together, with feet firm and stationary. Turn the body as far to the right as possible, then to the left as far as possible. Repeat five times. Breathing exercise No. 1, once.

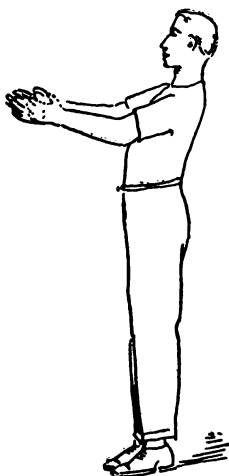


Fig. 24.

EXERCISE NO. 24.**Twenty Times.**

Stand erect, heels together. Raise both arms to near horizontal in front of body, place palms of the hands together, then rub hands together twenty times. Breathing exercise No. 1, once.

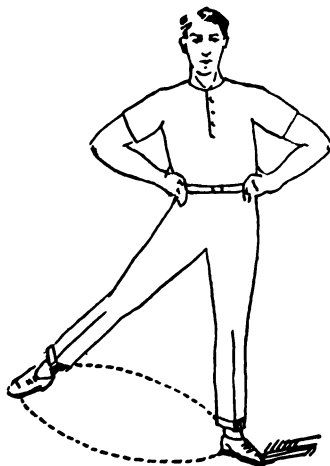


Fig. 25.

EXERCISE NO. 25.

Five Times in Each Direction With Each Limb.

Stand erect, heels together. Make as large a circle as possible with right leg straight at knee. Repeat with left leg in the same manner. After having done this exercise from before backward five times with each limb, repeat by doing it behind forward five times with each limb. Breathing exercise No. 1, once.



Fig. 26.

EXERCISE NO. 26.**Five Times.**

Stand erect, heels together. Close fists on chest. Raise arms upward as far as possible. Return to first position and repeat five times. Breathing exercise No. 1, once.

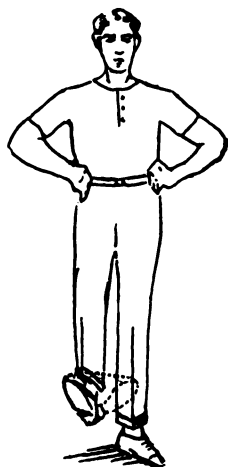


Fig. 27.

EXERCISE NO. 27.**Ten Times.**

Stand erect, heels together, hands on hips. Balance on left foot. Rotate right limb ten times. The same with the left leg. Breathing exercise No. 1, once.

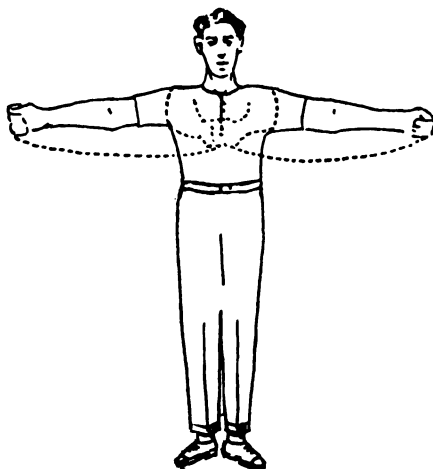


Fig. 28.

EXERCISE NO. 28.**Five Times.**

Stand erect, heels together, bring arms to a horizontal position stretched out on the same plane with the body. Bring hands together in front, then back to first position. Repeat five times. Breathing exercise No. 1, once.

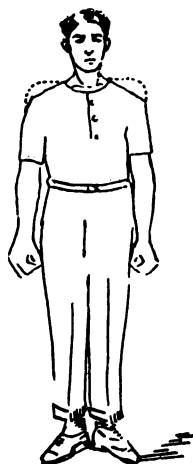


Fig. 29.

EXERCISE NO. 29.**Ten Times.**

Stand erect, heels together, arms vertically at side of body. Raise shoulders as high as possible ten times. Breathing exercise No. 1, once.

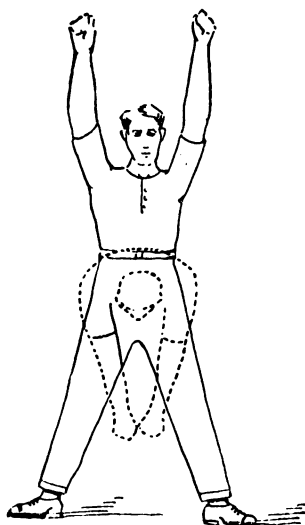


Fig. 30.

EXERCISE NO. 30.**Five Times.**

Stand erect, spread legs moderately, bring hands above head. Bend forward as far as possible, straighten up, bend backward as far as possible. Repeat exercise five times. Breathing exercise No. 1, once.

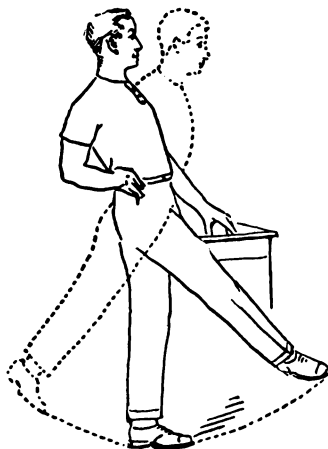


Fig. 31.

EXERCISE NO. 31.**Five Times.**

Stand erect, heels together. Holding limb stiff at knee, swing right limb backward and forward vertically five times. Repeat with the left. At first it may be necessary to support oneself a little with one hand. Breathing exercise No. 1, once.

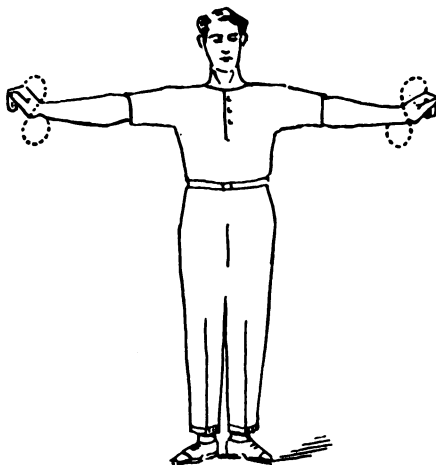


Fig. 32.

EXERCISE NO. 32.**Five Times With Each Hand.**

Stand erect, heels together. Bring arms up horizontal at the side of the body. With each hand make the figure of eight. This is sometimes best learned by drawing a figure of eight on the wall with one hand with the arm in position above indicated. When the motion is once learned it can be done simultaneously with both hands. Breathing exercise No. 1, once.

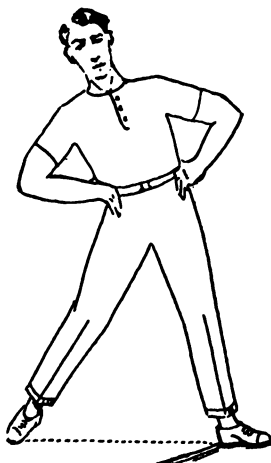


Fig. 33.

EXERCISE NO. 33.**Five Times With Each Leg.**

Stand erect, heels together, hands on hips. Abduct right leg as far as possible, keeping the knee straight. Alternate with left leg, doing each five times. Breathing exercise No. 1, once..

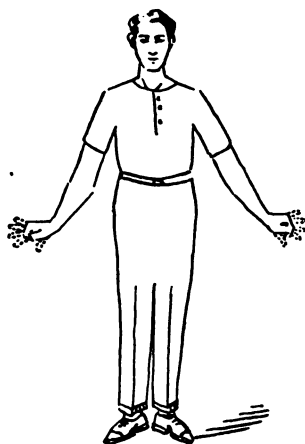


Fig. 34.

EXERCISE NO. 34.**Ten Times.**

Stand erect, heels together, arms hanging vertically at sides of the body. Extend and flex fingers ten times. Breathing exercise No. 1, once.

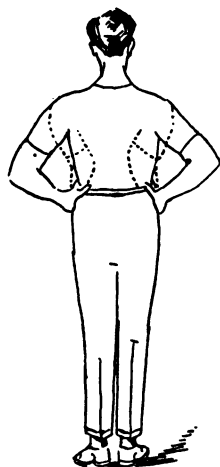


Fig. 35.

EXERCISE NO. 35.

Five Times.

Stand erect, heels together, hands on hips. Bring elbows as near together behind as possible. Repeat five times. Breathing exercise No. 1, once.



Fig. 36.

EXERCISE NO. 36.**Twenty-five Times.**

Stand erect, heels together, hands on hips. Go through with the trotting movement twenty-five times, standing on the same place however. Breathing exercise No. 1, once.

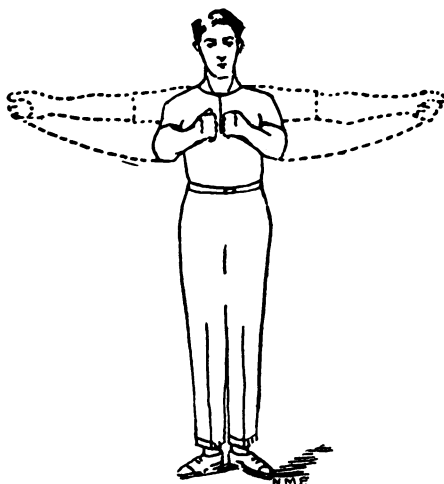


Fig. 37.

EXERCISE NO. 37.**Five Times.**

Stand erect, heels together. Arms horizontally forward, palms touching. Separate arms, throwing them backward as far as possible while raising on toes. Repeat five times. Breathing exercise No. 1, once.

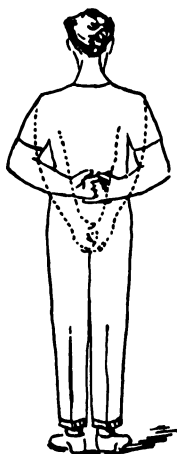


Fig. 38.

EXERCISE NO. 38.**Ten Times.**

Stand erect, heels together. Clasp hands behind back about opposite the waist line, keeping hands clasped, press them downward as far as possible. Bring them back to the first position. Repeat ten times. Breathing exercise No. 1, once.

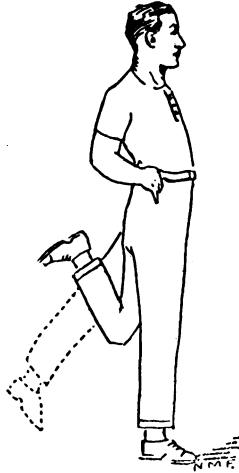


Fig. 39.

EXERCISE NO. 39.**Five Times.**

Stand erect, heels together, hands on hips. With knees straight, put right leg back as far as possible, then bend limb at knee. Repeat exercise five times, then the same with the left leg. Breathing exercise No. 1, once.



Fig. 40.

EXERCISE NO. 40.**Five Times.**

Stand erect, heels together, hands closed. Push both hands downward and backward as far as possible. Repeat five times. Breathing exercise No. 1, once.

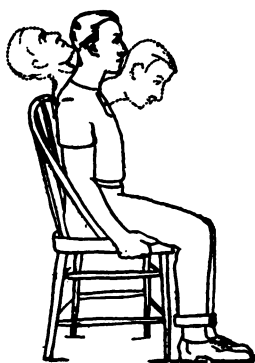


Fig. 41.

EXERCISE NO. 41.**Five Times.**

Sit erect, heels together. Bend head forward on chest as far as possible, then extend it backward as far as possible. Repeat five times. Breathing exercise No. 1, once.

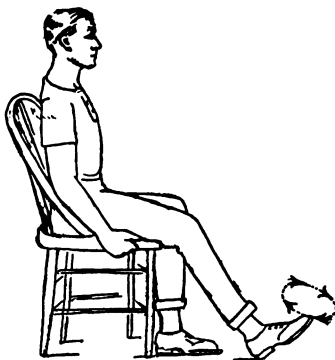


Fig. 42.

EXERCISE NO. 42.**Five Times.**

Sit on ordinary chair with one foot flat on the ground and the other slightly extended so that only heel touches ground. Hold knee still and have ankle move IN, UP, out and down with the emphasis on the IN and the UP. Repeat five times, then the same with the other leg. Breathing exercise No. 1, once.

This exercise is particularly indicated in persons suffering from flat-foot or weak arches.

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